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A STUDY OF ELEMENTARY CURRICULAR ACTIVITIES IN CITIZENSHIP

by

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A Thesis

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Approved by: _____ Date: _____

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INTRODUCTION

Truly the children are the most vital and valuable resources in the possession of a nation. It is the sensitive spirit of youth that is most open and hospitable to the truth that saves the world. It is our host of boys and girls that must make for progress and purpose of the future. Therefore the education of the children is always, in any era, the most necessary and most amply repaying work of the people.

But mere knowledge is of no value to a moral being. Knowledge must come winged with moral purpose, armed with practical possibilities.

The education most worth while must help us to see that different problems all have different values--that thoughts determine deeds, and that deeds determine destiny.

Now "Curricular Activities in Citizenship" will help remedy this defect in the training of our young people. It covers well-nigh every aspect of the difficult problem of education.

Taking part in activities stimulates the child along the line of his aptitudes and tendencies, and

will direct him into methods of correct thinking and correct conduct in group living.

The social ideal is the bugle call of the twentieth century. The world is beginning at last to see that no man can truly live unto himself alone.

The child's education should begin with simple activities in which he can make his own choices, do the act himself, with perhaps a small amount of guidance, and feel the thrill of success that accompanies all satisfactory accomplishments.

The task of the parents and teachers should be to use the precious time of youth, by directing the child carefully through the most life-like experiences, thus forming the right attitudes, ideals, and habits, all of which lead to worthy citizenship.

We must protect our children in their play-time as well as in their study-time, guarding them from waste of energy, from blight of evil habits. Mind and muscle must be correlated all along the way; and aptitudes must be joyously led toward some fitting and final vocation. Wise

guidance through realistic experiences should help children adjust to their place in the social order. For the welfare of these children is the welfare of the whole world.

The object of experience in curricular activities is to quicken the deeper understandings of the child, till he breaks forth to flower in the activities of the home, the neighborhood, the nation, the world.

Tampa, Florida.
August 18, 1938. The Author.

THE PROBLEM

There is only one problem in my mind as I begin this work. It is to furnish the child with enough worthwhile, realistic, and interesting experiences to create an appetite within him for more insights into the activities along the same line. This I trust will make him become more social and cooperative in response to the needs of other people, and will result in worthy citizenship.

Through the reliving, the comparison, and the evaluation of curricular activities or experiences in education it is my desire to lead the child to know how to choose, for himself, the good of life and to reject the bad, in order that he may live more abundantly and share with humanity to the maximum.

CLARIFICATION OF THE PROBLEM

It is my desire to show how the new education in which the child's interest is considered, and the pupil is allowed to develop the whole personality,- to do in order to become a better citizen to grow up in a miniature democractic society, so he may function successfully and happily in the social group and serve his fellow man as he helps carry on the work of his nation.

After having given the opinions of several authors who agree with me that curricular activities develop citizenship, I have given a sample unit on phosphate in which the reader will readily grasp the idea that through realistic experiencing in the school, the children actually lived together, struggled to find out what they wanted to know as individuals and as a group, acknowledged and corrected errors, praised the pupil when he did a superior piece of work, and evaluated their work according to the facts given. Through these experiences individual and group needs were met, and citizenship was being developed.

OUTCOMES IN CITIZENSHIP FROM CURRICULAR ACTIVITIES

The activity program fills a great need in the life of each child. Much time and effort has been wasted in trying to teach the child who was not interested in the subject matter being presented. I have found this fact out through years of experience and by reading.

Many a child has been driven away from school to cope with life without even the minimum amount of training necessary for worthy citizenship, because his school days were unbearable, uninteresting and monotonous. This child became a burden on society and a menace to the community.

The following quotations will help you see more clearly the necessity for such a program in the development of worthy citizenship.

John Deweyl says:

> Unless the problems of intellectual organization can be worked out on the ground of experience, reaction is sure to occur toward externally imposed methods of organization. There are signs of this reaction already in evidence. We are told that our schools, old and new, are failing in the main task. They do not develop, it is said; the capacity for critical discrimination and the ability to reason. The ability to

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[1] John Dewey, Experience and Education (New York; The Macmillan Company, 1938), pp. 107-8.

> think is smothered, we are told, by the accumulation of miscellaneous ill-digested information, and by the attempt to acquire forms of skill which will be immediately useful in the business and commercial world. We are told that these evils spring from the influence of science and from the magnification of present requirements at the expense of the tested cultural heritage from the past. It is argued that science and its method must be subordinated; that we must return to the logic of ultimate first principles expressed in the logic of Aristotle and St. Thomas, anchorage in their intellectual and moral life, and not be at the mercy of every passing breeze that blows.

According to John Dewey[2]:

> For under such conditions, the school becomes itself a form of social life, a miniature community and one in close interaction with other modes of associated experiences beyond the school walls. All education which develops power to share effectively in social life is moral. It forms a character which not only does the particular deed socially necessary but one which is interested in that continuous readjustment which is essential to growth. Interest in learning from all the contacts of life is the essential moral interest.

About the two kinds of teaching Harold Rugg and Ann Schumaker say[3]:

> Both teachers live in accordance with their peculiar sets of slogans or formulas.

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[2] John Dewey, Democracy and Education (New York; The Macmillan Company, 1916), p. 418.

[3] Harold Rugg, and Ann Schumaker, The Child-Centered School, (New York: World Book Comp., 1938, p. 322).

> The artist's slogans however, are growth, freedom, individuality, initiative; the artisan-teacher's are knowledge of set fact, skills, orderly quiet, the attainment of norms and standards. One is a guide, the other a taskmaster--a sort of section boss for the huge railroading system known as school.

Harry C. McKown[4] speaks of the importance of the activity program:

> To prepare the student for active life in a democracy. If he is to live in a democracy, it is but reasonable that the individual should be intelligently prepared for it, not only be learning about democracy but also by having actual contact with and participation in it. And this education must be natural and gradual.
>
> The early life of the child is not democratic; of necessity it is largely autocratic. He is restricted in many ways by his social being. He must be trained in habits too, because he has not arrived at the point where he can reason about worthy ideals and practice the worthy habits appropriate to them. Consequently he must be made to do certain things in certain ways.
>
> Now, as he nears the time to take his place as a citizen he must be taught the obligations and responsibilities of his coming membership in a democratic state. If he is not taught to recognize and assume these duties gradually and thoroughly, he will not be able to perform them successfully when they are suddenly thrust upon him. Training in a

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[4] Harry C. McKown, Extra- urricular Activities (New York: The Macmillan Company, 1937). pp. 12-14.

> democracy is the best preparation for living in one. Two short quotations from Dewey and one from Kilpatrick are pertinent; "Except so far as the school is an embryonic typical community life moral training must be partly pathological and partly formal. The child ought to have the same motives for right doing and to be judged by the same standards in the school, as the adult in the wider social life to which he belongs." And again, "The school must itself be a community in all which that implies." Kilpatrick says, "The effective school in a democracy must give its pupils an intelligent understanding of the issues of democracy, make them well disposed toward democracy as a way of life, and make them skillful in the co-operative activities through which democracy must function." If the school is so organized and administered that the student has opportunities and responsibilities somewhat similar in a small way to those he will have later on as a grown-up citizen, he will be the better able to meet and discharge these responsibilities as they occur.

Harry C. McKown[5] tells how to train for social fitness:

> Worthy citizenship, whether adult citizenship in a community or student citizenship in a school, implies a knowledge of society organization, an appreciation of personal responsibilities, discriminating leadership and followership, and properly functioning habits. The valuable member of society is an active, not a passive, member; he is a contributor because society is always in a state of change for better or for worse.
>
> Here again it is stupid to assume that because the student has discharged well the obligations of his mental education he, therefore, will necessarily discharge equally well

5 Harry C. McKown, Home Room Guidance (New York; McGraw-Hill Book Company, 1934), p. 10.

> his obligations of citizenship also. Yet this assumption is held by many individuals. As a matter of fact, the student may be worse off because of his mental training as far as desirable citizenship is concerned. In any case the good scholar is not necessarily the good citizen any more than the good citizen is necessarily the good scholar. He may be, but not necessarily so. Because of the gap between mental and social training we cannot assume that excellence in mental training will result in excellence in social fitness. The average community needs citizens far more than it needs scholars, for it is basically an organization of citizens, not scholars.

M. R. Hinson, and others[6], had in mind the activity program to develop citizenship, which they expressed in the following general attitudes to be developed in all the elementary grades:

ATTITUDES

1. To develop the scientific attitude.
2. To develop love of good music, literature, and art.
3. To develop the desire to be helpful to one's fellows.
4. To develop the desire to work with the group for the good of the group.
5. To develop respect for the rights of others.
6. To develop a courteous attitude toward others.
7. To develop the attitude of friendliness

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[6] M. R. Hinson, and others, The Course of Study for Florida Elementary Schools. Vol I. Grades I-VI. (Tallahassee, Florida: State Department of Public Instruction, 1937), p. 42.

and tolerance toward other people, especially toward those who differ in nationality and customs.

8. To develop an inclination to use materials wisely and save for future needs.

9. To develop a feeling of responsibility for group interests.

10. To develop an appreciation of the value of time.

11. To develop an attitude of cheerful acceptance of circumstances over which we have no control.

12. To develop an attitude of constructive respect for duly constituted authority.

13. To develop a favorable attitude toward the wholesome use of leisure time to meet physical and social needs.

14. To develop an attitude that the use of safety precautions is commendable and foolhardiness is not bravery.

15. To develop the attitude of applying the scientific facts of hygiene in taking charge of one's personal life.

16. To develop the attitude of dealing honestly with self and others.

17. To develop the idea that the increase of human happiness rather than the accumulation of wealth is the ideal toward which civilization must progress.

Martha Peck Porter[7] gives the needs of the child, which are met by the activity program:

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[7] Martha Peck Porter. The Teacher in the New School (New York: World Book Company) 1930, p. 53.

> These, then are the needs as I see them. The children must learn to work and play satisfactorily together. There must be widening of interests and growth in appreciations. They must be encouraged in the kind of curiosity which shall build up new interests. They must gain increased ability to read in order to find the new ideas, that shall widen understandings and develop appreciations. They must improve in ability to express their new ideas in building or other forms of constructions, in art forms, in speech, in written form, in play. Growth in these creative forms is dependent upon skill in the use of the specific tools, such as ability to draw, to write, to spell, to form sentences and paragraphs. It is also dependent upon development of higher standards of workmanship and better habits of work and of thought.

About higher behavior patterns Marion Paine Stevens[8] says:

> And last, we wish to establish certain habits and attitudes. In addition to physical habits, there are the social-moral habits of promptness, orderliness, obedience, self-control (a great saver of time and energy), perseverance, truth-telling, keeping a promise, economy in using materials, good manners (often called "minor morals"), reliability, taking responsibility, and seeing things through--in general, higher behavior patterns.

Another authority[9] lays emphasis upon education through participation if the child is to understand and practice desirable social relationships:

> Along with the introduction of the above types of experiences and the emphasis upon

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8 Marion Paine Stevens, The Activities Curriculum in the Primary Grades (Atlanta: D. C. Heath and Company, 1931), p. 13.

9 Henry J. Otto and Shirley A Hamrin, Co-Curricular Activities in Elementary Schools (New York; D. Appleton-Century Company, 1937), p. 5.

> education through participation there came increasing attention to aspects of child development which heretofore had occupied a relatively unimportant place in the school training of children. At every turn one heard about letting the school represnat life instead of a preparation for life, about organizing the school into a miniature society in which children would work and solve together the many problems arising in group living, about developing in children initiative, independence, self-reliance, critical thinking, cooperativeness, and mental and emotional stability. Increasingly recognition was given to the fact that "it is the function of the elementary school to help every child understand and practice desirable social relationships."

A. Gordon Melvin[10] says the children should themselves enter into activities:

> Thus the children of our community should know of the e acts, they should know of this world around us, how it is run for better or for worse. They should observe its activities and its men at work. They should themselves in their school life enter into these activities vicariously and develop similar activities themselves. For the activity program is but a means of living out the acts of life, those real and vital things which men do in realizing themselves.

In reference to the building of successful citizenship Martin J. Stormzand and Jane McKee[11] say:

> In all our dealings with problems of discipline we must keep in mind the fact that our aim is not our own professional comfort, not even the attainment of

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10 A. Gordon Melvin, The Activity Program (New York: John Day in association with Reynal and Fitchcock, 1936), page 266.

11 Martin J. Stormzand and Jane W. McKee, The Progressive Primary Teacher (New York: Houghton Mifflin Company, 1928), p. 142.

> satisfactory conditions for the academic learning of the child. We have as our objective primarily the social and moral development of the child. In thinking of the child as a member of a democratic society, we realize that, among the primary factors in the building of successful citizenship and good character, the qualities of independence and of initiative and self-control are the most important. Fundamentally, the child when he leaves school is a social and moral success, not if he relies on, if he needs, authority to make his choices, but rather if he himself makes wise and good choices, if he has learned how to use freedom.

SUMMARY OF QUOTATIONS. The activity program is necessary in order that the pupils may not be compelled to memorize unrelated facts, that are of no interest or use to them. The children need to be taught to work in life--like situations, to be given realistic experiences, that they may learn to reason logically, accept the facts when they find them, make choices inthe light of the facts found, live while they are learning--not prepare for life, but get great satisfaction from learning by doing, which will develop right understandings, attitudes, and habits for good citizenship.

PHOSPHATE

This unit of work, or activity of child interest, was worked out with a group of fourth grade children in the Seminole School, Tampa, Florida.

HOW THE ACTIVITY ORIGINATED.

On the first day of school the children of the fourth grade, Seminole school, Tampa, Florida, came back ready and eager, to share the experiences of their summer vacation. Some of the children had been on long trips to the West and to other parts of the United States. Many of them had been on shorter trips along the eastern coast and to the eastern mountain resorts, passing by phosphate plants.

There was no end to the exciting stories told and to the questions asked:

"Where did you go?"

"What did you see?"

"What did the coal look like?"

"How do the men mine gold?"

During the first three weeks of school many plans for the year were made. Space was kept on the blackboard where ideas which seemed to be both worth while and interesting to the group were written. It was not at all surprising to find a very live interest

in phosphate industries.

II. CHRONOLOGICAL DEVELOPMENT OF THE UNIT.

1. Getting Our Questions About Phosphate.

One of the first things we did was to formulate the questions about phosphate which we wanted answered. These were printed on a wall chart which was used as a guide throughout the entire study. The following questions are illustrative of those which were written on the chart:

1. Could we get out to a phosphate plant and see the way the phosphate is handled?

2. Could we write clearly, and neatly, in ink the facts we could find out about phosphate.

3. What color is phosphate anyway?

4. For what is it used?

5. Is it valuable?

6. How is it gotten from the ground, and how is the oil taken from it?

7. For what is the soil used after the phosphate is washed from it?

8. Where were the first phosphate mines in Florida located?

9. Do we consume most of the phosphate at home?

10. If not, where is it shipped?

11. Do we need to conserve the supply of phosphate?

2. Getting Necessary Materials Together.

Having assembled our questions, the next step was to set about answering them. Pictures, maps, and books about phosphate were needed. We needed to see phosphate.

Books. A committee of children went to the public library and came back with the books which are listed below. The list is divided into two parts; those for the children's use and those for teacher's use.

CHILDREN'S BIBLIOGRAPHY

Longstreet, R. J. and Goulding, R. L. Stories of Florida. Prather Publishing Company, Auburn Alabama, 1931, pp. 96-97.

Stockbridge, E. P. and Perry, J. H. Florida in the Making. The DeBower Publishing Company, Jacksonville, Florida, 1926, pp. 41-42.

Voorhees. Fertilizers. The Macmillan Company, New York, 1926, pp. 61, 81, 85.

TEACHER'S BIBLIOGRAPHY

The World Book. W. F. Quarrie and Company, Chicago. 1937. Vol. XIII, pp. 5574-5.

The New Student Reference Work. F. E. Compton Company, Chicago. 1913. Vol. III, p. 1475.

Times Encyclopedia and Gazetteer. Times Sales Company, Chicago. 1936. Vol V.

Oxford Universal English Dictionary. University Press, Oxford, 1937. Vol. Vll. P. 1490.

The New International Encyclopedia. Dodd-Mead and Company, New York, 1910. Vol. XV. p. 764-6.

Other Material. We wanted many pictures of the phosphate industry, so everyone was on the lookout for any that would be of interest. Materials were found in magazines, newspapers, and books. We decided to write to the Coronet Phosphate Company and ask for their free advertising material. The illustrated material the company sent was found most helpful in our study. The booklet was sent from Coronet Phosphate Company, 99 John Street, New York City.

3. Planning a Trip to the Coronet Phosphate Mines.

Every one was anxious to take a trip to the phosphate mines. Each child wrote a letter to Mr. W. H. Taylor, Supt., Coronet Phosphate Company, Plant City, Florida asking for permission to come to see a modern plant, and other things of interest about phosphate. Especially did they ask to be allowed to visit the museum at Mulberry.

Since these letters were to be sent to a very important man, they needed to be written correctly. The heading, the salutation, the margin, the body, and the closing were all matters that we needed to think about. The children listened to all the letters and decided that John's letter should go because (1) it was well written, (2) it asked the favor in the

right way, and (3) it was written in the correct form.

A prompt reply gave us permission to make the visit. The Superintendent also offered to furnish a guide to take us about and to answer our questions.

Since the children needed to get permission from their mothers before going on the trip, each child wrote another letter, this time to his mother explaining the purpose of the trip and inviting his mother to join us. The letters were sent in envelopes addressed by the children.

Many questions had to be decided before we went. How should we go? How could we make the trip quickly and safely, and for the least expense? How much money would we have to bring for the trip? Would it be worth that much money? How long could we stay? How should we go?

All of these questions necessitated group planning and group thinking. Alternative plans were suggested and discussed. After weighing each plan, decisions were made in the light of arguments put forth.

4. Making a Sketchbook for the Trip.

Some sort of book was needed in which to record the information we wished to remember. Many children

wanted to make sketches of the phosphate machinery they would see on the trip. Hence each child made a sketchbook out of 9 by 12 inch manilla paper. Some of the covers were designed before we took the trip, but most of the children waited to get ideas for their covers from things they would see.

There were certain pages that were common to all the books; such as :

"My Questions to Find Out."

"Things I Wish to See."

"My Map of the Phosphate Route."

There were individual pages in individual books, with such titles as:

"Kind of Train."

"Parts of a Phosphate Plant."

"List of the Things I saw and Liked."

Several blank pages were left in each book for sketches. All sketches were done in outline form with dark crayon. They were later refined and colored.

5. The Trip.

The trip itself was a most enjoyable one. Every child had something to find out. There were many things to see and sketch. Everyone was too busy to

get into trouble. The guide took us first through the fertilizer plant. Here we saw the employees at work as stenographers and bookkeepers, in one building and then in another building we saw the manufacture of fertilizer.

The pit at Mulberry was the next point of interest where we went. There we saw the water hose washing up the phosphate, the steam shovel dipping it up, and heard the dynamite actually work blowing it up. Then we saw the phosphate washed many times through screening. We next went to the museum. There we found articles labeled as follows:

1. Four-Tusked Mastadon Lower Jaw Bone.
2. Pebble Phosphate in Sand and Clay.
3. Phosphorus Aid to Good Teeth.
4. Coronet Phosphate First Aid Team.
5. Pictures of the Phosphate Machinery.
6. Camel Foot Bone.
7. Pebble Phosphate Rock - Matrix.
8. Pebble Phosphate Rock - High Grade A.
9. Pebble Phosphate Rock - High Grade B.
10. Pebble Phosphate Rock - Standard Grade.
11. Phosphate Screenings.
12. Phosphate Dust.

13. Small Fossils including Sharks Teeth, and Whale Tooth.

14. Large Miocene Shark Tooth.

15. Manatee Bone.

6. Work Done After Taking the Trip.

The first-hand experiences of the trip enabled us to answer many of the questions on the chart. As the questions were answered in group discussions they were checked on the chart. Many new questions which grew out of the experiences of the trip were added to the list of unanswered ones.

Much information had to be obtained at second hand. Here the books and pamphlets which has been collected helped us. The books that the children could read for themselves contained much information. These were used by individual children and by small committees. The books which were too difficult for the children to read were read to them in part, told to them in part, or used as a basis for simple stories which the teacher wrote and had mimeographed. These stories were written to answer the questions which the children could not answer for themselves.

Reading these books gave the children an opportunity to learn how to use tables of contents,

indexes, and chapter titles of books.

Maps were needed at different points in the study. A local map of Florida was used in order to determine the route to be taken to the plant. A map of the United States was helpful in locating the phosphate mines which were being talked about. We learned how to use maps--what the scale meant, what some of the lines meant; and where certain places were located.

There was an experiment to be worked out. By planting one begonia with the finest grade of phosphate in the soil, and another with large particles of phosphate we readily discovered that the plant could use the former material much more quickly than the latter.

7. Later Work on Our Books.

1. "My Trip to the Phosphate Plant."
2. "What I liked Best on the Trip."
3. "What I Saw While at the Pit."
4. "What Is Done at Coronet Plant."
5. "Pure Phosphate."
6. "Florida Phosphate Shipments in October"-Tribune.

Other children wrote original verses for their books. The rhymes which were found in, "A Child's

Garden of Verses," by Robert Louis Stevenson, which the teacher placed on the reading table, gave us an idea to start with.

Some titles from which the children wrote were given above. Many children wanted to write stories for their books. Some were written at home. Others were written as class exercises. These stories were individual, no two books having identical stories.

Creative Work. "A Phosphate Poem."

Approach. Children, I think our program is well-planned that we are to put on for our school next Friday, but I've been wondering if a poem would help to make it better. How many want to write one? Very well, we'll try.

Direction. Let's think now of the important points in writing a poem. Yes, it should have a musical sound and be put into lines, punctuated to fit the thought in it, and mean something. You found these facts out when you read, Robert Louis Stevenson's, "A Child's Garden of Verses." Suppose you think about what you personally want to write, then we'll take up your papers and choose the one that tells what we want told in the best way. All

of you have done very well. I'll write some of the best ones now on the board. Which shall I write? Do any of these tell all we want told? Can the audience really see that we've been learning about phosphate? Yes, it will be better to take the best lines and tell the whole story.

"The phosphate industry is very fine,
We hope our program has fixed this in mind,
We are sure somebody will want to sign,
Next term for a visit to the mines.
It is there you will see, if you choose to find,
Sand Piles and shovels around the pit lines,
Show cases with phosphates and bones inside,
And you will see buildings and machinery besides."

Are we satisfied with this poem? Yes, I like it. We've had a good time working on it together. You may take your own copies home tomorrow. If you like you may copy the one from the board for your writing lesson. If anyone can do a better one between now and Friday you may bring it to class. I thank you for helping so nicely. We found out that poetry is easy to write when we sit quietly and think together. When we take up our unit, on "Fish" we'll want to write another poem, perhaps.

Composition Work. Phosphate News.

We find phosphate in matches, baking powder, and cherry phosphate.

All machinery at Coronet and Mulberry is run by electricity, except the little steam shovel.

The dipper brings up fifteen yards of sand each time.

The water hose has a two hundred pound pressure per square inch.

Pine trees are planted on the overburden.

We find pebble phosphate in Hillsborough, Polk and Manatee counties.

Some of the men get as low as twenty-five cents an hour, others get as high as seventy-five cents an hour.

Many bones are washed up with the phosphate.

Loading Phosphate in a Boat.

The phosphate industry furnishes work for a great many seamen.

In loading a boat the phosphate is carried up in an elevator and put into a funnel-shaped bin. It is carried from the bin through a pipe, or shoot which places it in the boat.

A boat is never loaded entirely with phosphate

because it is so heavy it would sink the boat.

Useful Phosphate.

Usefulness of a phosphate depends upon a number of things. The rate of decay, or time required to change to such a form as to become available to the plant, the quickness with which a phosphate will feed a plant depends upon what the phosphate is made of, how fine it is; the soil to which it is applied, and the crop for which it is used.

The main point, however to farmers is the amount of increase that he may obtain from a definite expenditure.

Pure Phosphate.

For many years the managers of the phosphate plant did not know that the soil that had been washed from the phosphate was worth anything. They found out that it contained the most valuable phosphate. This phosphate is washed out by using the same methods which we have told you about in an earlier lesson only the screen wire is finely woven through which it passes because it is very fine or little.

In fact it is so fine the plant can use it for food much more quickly than any other phosphate.

Locating the Phosphate.

When the men are sent out to locate the phosphate they carry with them a driller. They may have to drill only a very few feet. But they often drill through as many as fourteen to fifteen feet of soil before they get down to the phosphate.

The driller works a great deal like a pump does when one is pumping water.

The phosphate is taken from land that contains a thick layer of phosphate. And this phosphate must be of high grade.

Florida Phosphate Shipment October. Copied from Tampa Morning Tribune.

Phosphate exports hit a high mark during October with a total of 90,318 tons being shipped to Japan, Holland, England, Canada, Italy, Germany, Polland, and Czeckoslovakia. The monthly figure was considerable, above the average.

More than a third of the total, or about 34,000 tons was shipped to Japan in 5 large cargoes. Italy also received 5 cargoes, totaling 13,500 and about 12,300 tons were shipped to Holland.

8. Art Work.

Two very lovely large friezes were made as group endeavors. One of these was the machinery used in phosphate plants and was enlarged from the small sketches. Another was a freight train with old phosphate dumps and new dumps. These friezes were made on wrapping paper. Sketched in crayon first, and then painted with poster paint.

Many small pictures were also made. Some were used in books and others were exhibited in the classroom.

9. Reading Work. The children have looked in their home libraries, they asked for books at the public library, they have read from school library books.

10. Writing Work. Made booklet with all work copied neatly in ink.

11. Arithmetic Work. They have worked problems about men working in phosphate mines.

12. Geography Work. They have tried to find out where the phosphate is located, in counties, states, and countries, and also where it is shipped.

13. English Work. They have learned a great deal about the sentences according to use, how to write them correctly, the correct way to paragraph, to write much more accurately, and use the exact word.

14. Spelling or Word Study Work. They have kept a list of new words, made a dictionary of them, and studied them.

LLL. How the Activity Culminated.

Children in other rooms had become interested in our work on phosphate. The fourth grade children who were near neighbors were especially interested. They asked so many questions that we decided to invite them to a Phosphate Assembly Program.

This decision necessitated group planning. We made a list of the topics which we thought would make good speeches. Each child then chose his own topic.

In preparing these speeches standards for a good speech had to be developed. Our standards were: (1) stick to the subject; (2) plan what you are going to say; and (3) make others enjoy your talk. Some children wrote their speeches in advance. Others spoke from notes, not writing

anything. There was only one rehearsal and at that time everyone received suggestions for improving his talk. Individual help already had been given.

Invitations for the program were written to fourth, fifth, and sixth grade children. Some of them were written in original verse; others, in ordinary letter form.

The work on the program served to organize the information that had been gained during the study, for it touched the high points of the entire study. Sharing this experience with others was real fun.

IV. Alternative Plans and Suggested Improvements.

There are many ways in which this whole unit of work might be made richer. A few alternative ways are mentioned here.

A trip to other mines would give added first-hand experiences.

The activity might culminate in an original play.

Then, again a large class book could be made to serve as a record of the entire study. It could be made up of the best of the individual work from the children's books.

A large floor map could be made with the routes

to the phosphate mines laid out on it. This map might be drawn to scale, with cities placed fairly accurately.

Phosphate mines in different countries might also be studied in much greater detail.

Make a movie, showing the operations of the phosphate industry.

Citizenship Outcomes. The children developed and extended their understanding and appreciation of life about them in such a way that each one intelligently directed his life as a worthy citizen.

As the children studied the relationship of man to his environment they became more tolerant of other people and their customs.

A group spirit was created. Each child became anxious to contribute his best for the good of the group. Three indifferent, over-age, uncooperative boys became interested in working with others and made the best contributions, therefore leadership was developed.

Respect for honest work was developed. Each child took pride in doing his best.

The children learned to give and take criticism courteously.

The attitude of dealing honestly with self and

other people was developed. Each child decided for himself what he should do in case he had broken the group standards of conduct, work, honesty, etc.

The pupils became more interested in the economic value of other resources such as oranges, lumber, cigars, and fish.

Understanding of interdependence and interrelation of one group of people upon other groups developed through the study of the Coronet workers.

Personality was expanded through growth and adjustment in group activities.

Punctuality became a habit.

Everyone did better work at home, at school, at church, because they had learned team-work.

A safety code was developed by the class from having heard about the one used at Coronet.

Suggested improvements in their own community were given.

The children developed an appreciation of time. They learned to tell time so they could use it more wisely.

They developed an idea that human life is far more valuable than material wealth, which they demonstrated by rendering their best service to

each member of the class. They were little democratic citizens living in a miniature democratic society, with the welfare of each and everyone foremost in their minds.

PHOSPHATE

Phosphate, though classed as a mineral, owes its value to the fossilized bones of pre-historic sea animals, which were deposited upon the bed of the ocean when the Florida peninsula was still under water, countless geologic ages ago. In all probability the entire bed of all the oceans in the world is lined with the fossil remains of extinct sea animals. In Florida these deposits are so thick in spots as to suggest a pre-historic graveyard.

All that remains of these vanished creatures is the phosphorus which constitutes so large a proportion of all animal matter. The bones themselves have long vanished, although here and there in the process of phosphate mining, remains of huge skeletons are unearthed. The mineral portions have become petrified and the rock thus formed is impregnated with phosphorus, which is one of the three essential elements in the manufacture of fertilizers for agricultural purposes, the other two being potash and nitrogen. The phosphate mines of Florida, therefore, are owned and operated by the great agricultural chemical

companies, engaged in the manufacture of fertilizers. They lie chiefly to the west of the center of the state, stretching from south of Bartow to north of Ocala, with a few scattered deposits elsewhere; while the earlier phosphate operations were confined to the rock formations in the Ocala district the present output is chiefly of pebble phosphate from the Bartow region.

Phosphate mining is done nowadays largely by the "Hydraulic" method. After the surface layer of earth, which may be from ten to fifty feet thick, has been stripped off, the phosphate deposit is dislodged by means of water-jets at high pressure, which wash the pebble or rock to pits from which it is easily removed mechanically. Some of the phosphate mines go down to a depth of more than a hundred feet.

In order to reduce the phosphate to its most valuable commercial form it requries treatment with sulphuric acid, the resulting product being known as acid phosphate. There are one or two very small plants in Florida where this acid treatment of the phosphate rock is carried on.

Most of the phosphate rock mined in Florida is shipped by rail to the nearest seaport, most of it going to Tampa, where it is loaded on ships and sent to the fertilizer plants on the northern seaboard of the United States, or even to Europe, for the acid treatment, after which the acid phosphate is shipped back to Florida.

To the outside observer this seems to be an economic waste, in view of the fact that so large a proportion of the market for the finished product lies in Florida and the adjacent southern states. The world's largest deposits of sulphur, from which the sulphuric acid used in the manufacture of acid phosphate is most readily derived, lie only a short distance across the Gulf of Mexico, in Louisiana. The only explanation which those familiar with the phosphate situation in Florida are able to put forward as to why the Florida phosphate and the Louisiana sulphur are not most economically combined at some Florida seaport, is that Florida's phosphate output is not controlled by or operated in the interest of Florida, but is in the

hands of Northern corporations whose interest in Florida is a minor one.

Florida's output of phosphate rock has reached as high as $19,000,000 in annual value. At present, it is running at a lower rate. Some of the phosphate mines are shut down, and others are only in partial operation.

Europe furnishes one of the principal markets for phosphate, and there have recently been discovered in Morocco much larger beds of phosphate, located closer to the European market and with an abundant supply of cheap labor available for mining operations. So valuable are these Morocco deposits that it has been stated that one of the issues which brought on the Riff warr in North Africa was the question of the ownership of the phosphate mines.

Florida still has more than 200,000,000 tons of phosphate rock in reserve, all of which will eventually be utilized.*

*Stockbridge and Perry. Florida in the Making. (Kingsport, Tennessee. Kingsport Press, 1926), pp.41-43.